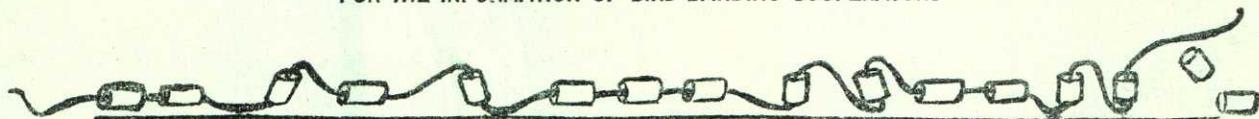


BIRD BANDING NOTES

ISSUED BY THE BUREAU OF BIOLOGICAL SURVEY, UNITED STATES DEPARTMENT OF AGRICULTURE
FOR THE INFORMATION OF BIRD-BANDING COOPERATORS



Vol. 2

Washington, D. C., September, 1938

No. 16

Don't forget: The series designation is an important part of the band number and must be used on both schedules and return cards.

IN MEMORIAM - WILLIAM I. LYON

It is with the greatest regret that the Biological Survey records the passing, on June 13, 1938, of William I. Lyon, president of the Inland Bird Banding Association.

In point of continuous banding activity, Mr. Lyon probably held the record, as he started work in 1913 under the old American Bird Banding Association and was already the operator of a productive station when this work was taken over by the Bureau in 1920. Since that time he not only banded nearly 100,000 birds, but also found time to do extensive lecturing and writing to further inform the general public that "wild birds wear bands." When the Inland Association was organized in 1922 he became its first secretary, graciously acclaiming Dr. S. Prentiss Baldwin for the presidency, a position to which he was later advanced and which for many years he filled with distinction.

GENERAL INFORMATION TO COOPERATORS

The Biological Survey regrets that in recent years issuance of Bird Banding Notes has been limited to an annual report number. Copy for additional issues is abundant, but time for its preparation has not been available.

Flyway biologists.—The past fiscal year was again a period of great activity in the Section of Distribution and Migration of Birds, not only for the Washington office, but also for the Flyway biologists.

During the summer of 1937 the four field naturalists gave their attention to waterfowl conditions in Canada, working north to Baffin Land and the Delta of the Mackenzie River and from Newfoundland and the Maritime Provinces on the east to British Columbia on the east. Biologist C. E. Gillham, while working in the Mackenzie delta region, banded several juvenile Black Brant, while biologist H. S. Peters banded Black Guillemots and Arctic Terns on the coast of Labrador. Such work was, of course, incidental to their regular duties.

During the winter, biologists L. J. Goldman and G. B. Saunders were engaged with similar investigations in Mexico.

At the present writing (August, 1938), these men are again in the north. Mr. Peters, having worked through New Brunswick, Nova Scotia, and Newfoundland, is pursuing his studies in Quebec and northern Ontario; Mr. Gillham is on the Arctic coast, at latest report being established at Cambridge Bay, Queen Victoria Island; Dr. Saunders is continuing his investigations in the prairie Provinces of Saskatchewan and Alberta; and Mr. Goldman, having again covered parts of British Columbia, has proceeded to Alaska and is engaged in the delta of the Yukon River.

Handling of records.---With another year's work behind us it appears that some operators still fail to appreciate the need for some of the rules that have been formulated. While they will constitute repetition to many, it is hoped that the following will be read by all:

Incomplete identification.---Banding a bird that cannot be correctly or completely identified is a pure waste of effort. The chances are 100 to 1 against the finder of such a bird knowing enough to identify it; so if the original banding record is questionable, the recovery data are worse than useless. If you don't know, don't band it. Also, identification must be carried to the species. "Thrush" or "Blackbird" is but little better than no identification at all.

Scientific names are not necessary, but if used, care should be exercised that the common and technical names are for the same species. One schedule received during the year reported banding records for "Plectrophenax nivalis, Song Sparrow." In this case the scientific name belonged to the Snow Bunting.

Schedules.---Operators will save time by taking care to list records of only one species on a schedule. Instructions to office personnel are to return schedules containing records for two or more species.

Do not start new schedules at the beginning of a new calendar year if an unfilled one from the previous calendar year is available. It only serves to add to the blank paper in a very large file. Copying of partially filled schedules onto earlier schedules for the same species is now in progress as a WPA project.

Care should be taken that records are not duplicated. If in doubt, a note to the Washington office will bring advice regarding the last individual banded for the species in question. Duplication on the schedules causes a great deal of unnecessary labor when the totals for the year are compiled.

Apropos of this the Survey appreciates the offer of Paul E. Downing, of Highland Park, Ill., to list all old birds on each new schedule submitted. Such a task would be a major operation at many long-established stations and would not be practicable. His suggestion that permit numbers be placed on schedules following the name of the cooperator will, however, be of assistance, particularly when returns are being carded in the Washington office.

When two or more persons charged with bands are working together, care should be taken not to get the bands mixed. Remember, the Bureau's issue record is the key to the banding files, and the use of all bands should be reported under the name of the person to whom they are charged.

When large numbers of birds of one species - gulls, terns, herons, chimney swifts, and others - are banded on 1 day, the bands should be used in sequence and the day's work reported in a line or two on the schedule by the use of inclusive numbers rather than by listing every band with its data (see page 105 in the Manual).

The permanent mailing address should always appear in the upper right-hand corner of each schedule. The localities for birds banded away from the home station should be noted in the section under the heading "substations," the appropriate letter appearing after each record affected.

Schedules should always be filled out with pen and ink or typewritten. Do not use lead pencil.

Permits.--Cooperators moving from one State to another and desiring to continue their banding work should first obtain the necessary extension of their permits.

Returns.--A station operator recovering a banded bird should be sure the bird is not his own before reporting the case as a "foreign return." Overlooking the series designation is a frequent cause of such errors.

What birds to band.--All species native to North America and the European Starling may be banded, but English Sparrows, domestic pigeons, pheasants, and hand-reared quail should not be banded without specific authority.

It is not practical to band hummingbirds, as the size 0 band is much too large, and cutting it down destroys part of the number so that return records are of little value.

Return cards.--These cards must be handled carefully or they will not function through the machines. Paper clips and rubber bands should never be attached to them.

Publication.--Cooperators are urged to publish in the various ornithological journals, items of special interest. Several State records have been made at banding stations, and these should be placed on permanent record.

Bird Banding in Romania.--Under date of February 24, 1938, the Survey received a

communication from A. M. Comsia, Game Inspector, Bucharest, Romania, in which he stated he had the responsibility of organizing some bird-banding stations in that country. Specimens of American bands and forms were sent him, together with a copy of the Manual and other literature.

Gull Survey.—The Herring Gull study conducted last year by the Linnaean Society of New York, the Northeastern Bird Banding Association and the National Association of Audubon Societies, is being repeated this year. Celluloid bands in five colors have been furnished by the Bureau and have been added to the regular aluminum bands at nine selected colonies on the coasts of New England and Canada. Nearly 8,000 young gulls have been so marked. Last year 180 sight recoveries were obtained in the New York City district alone.

A similar project also has started on the Pacific coast under the auspices of the Western Bird Banding Association.

NEW BIRD BOOKS

Among the new books on birds that have appeared within the last year, a few are of special interest to the operators of banding stations.

"The Log of Tanager Hill," by Marie Andrews Commons. Published by the Williams and Wilkins Co., Mt. Royal and Guilford Aves., Baltimore, Md. Price \$2.50 per copy by mail.

This is the first report of a bird banding station to be published in book form, and it will undoubtedly be desired in the library of every station. It is understood that the edition is limited to 1500 copies, though there are more than 2000 banding stations. The station of Mr. and Mrs. Commons was operated on the shores of Lake Minnetonka, Minn., for many years, and in her report, Mrs. Commons gives a most delightful account of their work, taking the reader on a day by day trip to the traps over the beautiful grounds of the station. An appendix lists all return and recovery records.

"The Book of Birds," 2 vols. Edited by Gilbert Grosvenor. National Geographic Society, Washington, D. C. Price \$5.00 per set by mail.

For the first time, a work presents in full color all the major species of North American birds. The text was written by several well-known ornithologists. Volume 2 contains a list of some of the more interesting and unusual returns and recovery records of banded birds.

"Life Histories of North American Birds of Prey," by A. C. Bent. U. S. National Museum Bulls. 167 and 170. For sale by Superintendent of Documents, Government Printing Office, Washington, D. C., at 70¢ for No. 167 and 60¢ for No. 170.

The works contain summations of our knowledge of the different vultures, hawks, and owls.

"Bird Migration," by A. Landsborough Thomson. Published by H. F. and G. Witherby, London, England. Price 5 shillings.

Dr. Thomson is one of the foremost European students of migration, and in this work he gives a short account of the general features and theories of this subject.

"Birds of America," published by Doubleday Doran and Co., New York, N. Y. Price \$3.95.

This work is a reprint in one volume of the three volumes published 19 years ago.

WORK DURING THE YEAR

Physical limitations in handling the great mass of detailed records, which obviously must be maintained with a high degree of accuracy, continue to make it necessary to decline numerous offers of cooperation. The list of cooperators does, however, contain the names of some who have made no report in several years, and it is hoped that this "dead wood" can be removed in the near future so that others who desire to participate may be accorded an opportunity.

On June 30, 1938 the number of cooperators was 2,193 as against 2,129 a year ago. Of these, 110 operate waterfowl stations, 30 being located on Federal refuges.

Table 1 shows a comparison of the gross banding operations in 1938 with those in 1937.

Table 1.--Banding Work During 1937 and 1938

| | <u>1937</u> | <u>1938</u> |
|---------------------------------------------|-------------|-------------|
| Banded birds reported..... | 300,894 | 346,056 |
| Returns received..... | 17,011 | 22,950 |
| Grand total of birds banded since 1920..... | 2,482,044 | 2,828,100 |
| Grand total of returns since 1920..... | 152,964 | 175,914 |

Birds banded.--Following the practice of recent years, there are listed by species, in Table 2, the number of birds banded during the fiscal year 1938. The order of arrangement conforms to the A.O.U. Check-list of 1910, which is the system employed in the Section. An asterisk (*) indicates a species new to the list of banded birds, of which the following 17 have been added during the year: Noddy Tern, Laysan Albatross, Pacific Fulmar, Wedge-tailed Shearwater, Bulwer's Petrel, Blue-faced Booby, Egyptian Goose, Masked Bob-white, White-

crowned Pigeon, Ringed Turtle Dove, White-tailed Kite, Harris's Hawk, Sennett's White-tailed Hawk, Smooth-billed Ani, Golden-fronted Woodpecker, Black-whiskered Vireo, and Lucy's Warbler. Considering the large number of species that have already been banded, this is a most remarkable record, even with the deletion of the extralimital species.

All subspecies are included in the total for the species, and the name used is that of the typical species; for example, the Olive-backed Thrush (Hylocichla ustulata swainsoni) does not appear in the list as it is a subspecies of the Russet-backed Thrush (Hylocichla ustulata ustulata), under which the olive-backed bird is grouped. In all such cases the English name is followed by the technical specific name and the word "group."

Table 2.--Number of individuals of each species of bird banded and reported during the fiscal year 1938

| | | | |
|-------------------------------|--------|---------------------------------|--------|
| Western Grebe | 1 | Black Skimmer | 660 |
| Holboell's Grebe | 5 | * Laysan Albatross | 85 |
| Horned Grebe | 5 | * Pacific Fulmar | 1 |
| Eared Grebe | 1 | * Wedge-tailed Shearwater | 492 |
| Pied-billed Grebe | 31 | * Bulwer's Petrel | 6 |
| Loon | 7 | Leach's Petrel | 128 |
| Atlantic Puffin | 171 | * Blue-faced Booby | 1 |
| Black Guillemot | 104 | White-bellied Booby | 31 |
| Atlantic Murre | 469 | Red-footed Booby | 47 |
| Razor-billed Auk | 15 | Water Turkey | 1 |
| Dovekie | 2 | European Cormorant | 204 |
| Glaucous-winged Gull | 6 | Double-crested Cormorant | 687 |
| Great Black-backed Gull | 4 | White Pelican | 365 |
| Western Gull | 563 | Brown Pelican | 342 |
| Herring Gull | 18,805 | Man-o'-war-bird | 3 |
| California Gull | 249 | American Merganser | 6 |
| Ring-billed Gull | 6,198 | Red-breasted Merganser | 15 |
| Laughing Gull | 1,075 | Hooded Merganser | 9 |
| Franklin's Gull | 10,841 | Mallard | 13,587 |
| Bonaparte's Gull | 1 | Wild | 11,519 |
| Gull-billed Tern | 3 | Hand-reared | 2,068 |
| Caspian Tern | 1,061 | Mallard-Black Duck hybrid | 8 |
| Royal Tern | 2,125 | Black Duck | 7,348 |
| Cabot's Tern | 16 | Wild | 6,319 |
| Forster's Tern | 199 | Hand-reared | 1,029 |
| Common Tern | 14,376 | Florida Duck | 159 |
| Arctic Tern | 873 | Gadwall | 694 |
| Roseate Tern | 3,053 | European Widgeon | 5 |
| Least Tern | 1,012 | Baldpate | 1,379 |
| Sooty Tern | 2,084 | Green-winged Teal | 8,372 |
| Black Tern | 143 | Blue-winged Teal | 5,353 |
| Noddy Tern | 86 | Cinnamon Teal | 420 |

| | | | |
|----------------------------------|--------|------------------------------|-------|
| Shoveller | 495 | Clapper Rail | 5 |
| Pintail | 16,360 | Virginia Rail | 12 |
| Wild | 16,060 | Sora | 18 |
| Hand-reared | 300 | Yellow Rail | 8 |
| Wood Duck | 593 | Black Rail | 5 |
| Wild | 405 | Purple Gallinule | 22 |
| Hand-reared | 188 | Florida Gallinule | 675 |
| Redhead | 2,183 | Coot | 2,206 |
| Wild | 2,083 | Northern Phalarope | 4 |
| Hand-reared | 100 | Wilson's Phalarope | 16 |
| Canvasback | 740 | Avocet | 23 |
| Wild | 644 | Black-necked Stilt | 18 |
| Hand-reared | 96 | Woodcock | 94 |
| Greater Scaup | 165 | Wilson's Snipe | 8 |
| Lesser Scaup | 5,295 | Dowitcher | 1 |
| Ring-necked Duck | 2,057 | Stilt Sandpiper | 15 |
| American Goldeneye | 3 | Pectoral Sandpiper | 57 |
| Bufflehead | 29 | White-rumped Sandpiper | 8 |
| Old-squaw | 7 | Baird's Sandpiper | 9 |
| American Eider | 4 | Least Sandpiper | 315 |
| American Scoter | 2 | Red-backed Sandpiper | 11 |
| White-winged Scoter | 4 | Semipalmated Sandpiper | 564 |
| Ruddy Duck | 83 | Western Sandpiper | 22 |
| Snow Goose | 34 | Sanderling | 6 |
| Blue Goose | 280 | Marbled Godwit | 11 |
| Ross's Goose | 3 | Greater Yellowlegs | 21 |
| White-fronted Goose | 39 | Lesser Yellowlegs | 16 |
| Canada Goose | 473 | Solitary Sandpiper | 8 |
| Wild | 458 | Willet | 18 |
| Hand-reared | 15 | Upland Plover | 6 |
| Black Brant | 9 | Spotted Sandpiper | 249 |
| Fulvous Tree-Duck | 15 | Long-billed Curlew | 3 |
| * Egyptian Goose | 3 | Hudsonian Curlew | 7 |
| Whistling Swan | 5 | Black-bellied Plover | 3 |
| Roseate Spoonbill | 10 | American Golden Plover | 1 |
| White Ibis | 24 | Killdeer | 253 |
| White-faced Glossy Ibis | 20 | Semipalmated Plover | 31 |
| Wood Ibis | 107 | Piping Plover | 123 |
| American Bittern | 48 | Snowy Plover | 2 |
| Least Bittern | 8 | Wilson's Plover | 13 |
| Great Blue Heron | 348 | Ruddy Turnstone | 1 |
| American Egret | 14 | Oyster-catcher | 14 |
| Snowy Egret | 459 | Bob-white | 657 |
| Louisiana Heron | 535 | * Masked Bob-white | 33 |
| Little Blue Heron | 235 | Mountain Quail | 1 |
| Green Heron | 60 | California Quail | 163 |
| Black-crowned Night Heron | 793 | Gambel's Quail | 395 |
| Yellow-crowned Night Heron | 23 | Ruffed Grouse | 11 |
| Sandhill Crane | 8 | Willow Ptarmigan | 3 |
| King Rail | 3 | Sharp-tailed Grouse | 72 |

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|-------------------------------------|-------|----------------------------------------------|--------|
| Ring-necked Pheasant | 29 | Belted Kingfisher | 47 |
| Hungarian Partridge | 24 | Hairy Woodpecker (<u>villosus</u> | |
| Wild Turkey | 22 | group) | 98 |
| Wild | 2 | Downy Woodpecker (<u>pubescens</u> | |
| Hand-reared | 20 | group) | 385 |
| Band-tailed Pigeon | 38 | Yellow-bellied Sapsucker | |
| * White-crowned Pigeon | 25 | (<u>varius</u> group) | 55 |
| Mourning Dove | 5,539 | Pileated Woodpecker | 3 |
| White-winged Dove | 9 | Red-headed Woodpecker | 67 |
| Ground Dove | 164 | Ant-eating Woodpecker | 3 |
| Inca Dove | 286 | Red-bellied Woodpecker | 60 |
| Chinese Spotted Dove | 442 | * Golden-fronted Woodpecker | 2 |
| * Ringed Turtle Dove | 1 | Gila Woodpecker | 13 |
| Turkey Vulture | 30 | Flicker (<u>auratus</u> group) | 657 |
| Black Vulture | 2,529 | Red-shafted Flicker | 32 |
| * White-tailed Kite | 3 | Chuck-will's-widow | 1 |
| Marsh Hawk | 188 | Poor-will | 1 |
| Sharp-shinned Hawk | 36 | Nighthawk (<u>minor</u> group) | 17 |
| Cooper's Hawk | 73 | Texas Nighthawk | 2 |
| Goshawk | 7 | Chimney Swift | 25,607 |
| * Harris's Hawk | 2 | Ruby-throated Hummingbird | 13 |
| Red-tailed Hawk | 110 | Rufous Hummingbird | 1 |
| Red-shouldered Hawk | 27 | Kingbird | 91 |
| Swainson's Hawk | 12 | Arkansas Kingbird | 123 |
| Broad-winged Hawk | 24 | Crested Flycatcher (<u>crinitus</u> | |
| * Sennett's White-tailed Hawk | 6 | group) | 42 |
| Rough-legged Hawk | 13 | Arizona Crested Flycatcher | 5 |
| Ferruginous Roughleg | 16 | Ash-throated Flycatcher (<u>cinerascens</u> | |
| Golden Eagle | 10 | group) | 9 |
| Bald Eagle | 38 | Phoebe | 391 |
| Prairie Falcon | 21 | Say's Phoebe | 35 |
| Duck Hawk | 24 | Black Phoebe | 20 |
| Pigeon Hawk | 12 | Wood Pewee | 17 |
| Sparrow Hawk | 154 | Western Wood Pewee | 1 |
| Audubon's Caracara | 2 | Yellow-bellied Flycatcher | 21 |
| Osprey | 98 | Western Flycatcher | 5 |
| Barn Owl | 32 | Acadian Flycatcher | 4 |
| Long-eared Owl | 35 | Alder Flycatcher (<u>trillii</u> | |
| Short-eared Owl | 22 | group) | 15 |
| Barred Owl | 4 | Least Flycatcher | 79 |
| Saw-whet Owl | 21 | Vermilion Flycatcher | 4 |
| Screech Owl | 119 | Horned Lark (<u>alpestris</u> group) | 102 |
| Great Horned Owl | 45 | Magpie | 469 |
| Snowy Owl | 3 | Yellow-billed Magpie | 1 |
| Burrowing Owl | 29 | Blue Jay | 3,154 |
| Pigmy Owl | 1 | Steller's Jay (<u>stelleri</u> group) | 28 |
| * Smooth-billed Ani | 28 | California Jay | 92 |
| Roadrunner | 12 | Arizona Jay | 1 |
| Yellow-billed Cuckoo | 29 | Canada Jay (<u>canadensis</u> group) | 5 |
| Black-billed Cuckoo | 33 | Raven | 1 |

| | | | |
|----------------------------------------|-------|-----------------------------------------------|--------|
| Crow | 1,155 | Golden-crowned Sparrow | 1,181 |
| Fish Crow | 39 | White-throated Sparrow | 17,026 |
| Piñon Jay | 2 | Tree Sparrow | 3,418 |
| European Starling | 7,810 | Chipping Sparrow | 2,781 |
| Bobolink | 24 | Clay-colored Sparrow | 925 |
| Cowbird | 2,032 | Brewer's Sparrow | 3 |
| Bronzed Cowbird | 9 | Field Sparrow | 1,126 |
| Yellow-headed Blackbird | 733 | White-winged Junco | 1 |
| Red-winged Blackbird | 4,622 | Junco (<u>hyemalis oregonus</u> | |
| Tricolored Red-wing | 7,200 | group) | 14,701 |
| Eastern Meadowlark | 182 | Red-backed Junco (<u>phaeonotus</u> | |
| Western Meadowlark | 93 | group) | 316 |
| Arizona Hooded Oriole | 64 | Pine-woods Sparrow | 1 |
| Orchard Oriole | 104 | Rufous-crowned Sparrow | 1 |
| Baltimore Oriole | 527 | Song Sparrow | 7,028 |
| Bullock's Oriole | 41 | Lincoln's Sparrow | 2,097 |
| Rusty Blackbird | 15 | Swamp Sparrow | 778 |
| Brewer's Blackbird | 722 | Fox Sparrow | 1,665 |
| Grackle (<u>quiscula</u> group) | 4,901 | Red-eyed Towhee | 1,860 |
| Boat-tailed Grackle | 1,670 | Arctic Towhee (<u>maculatus</u> group) | 466 |
| Evening Grosbeak | 1,212 | Cañon Towhee (<u>fuscus</u> group) | 215 |
| Pine Grosbeak | 26 | California Towhee (<u>crissalis</u> | |
| Purple Finch | 6,477 | group) | 253 |
| Cassin's Purple Finch | 36 | Abert's Towhee | 64 |
| House Finch | 4,020 | Green-tailed Towhee | 27 |
| Crossbill | 12 | Cardinal | 1,708 |
| White-winged Crossbill | 3 | Pyrrhuloxia | 38 |
| Redpoll | 695 | Rose-breasted Grosbeak | 119 |
| Goldfinch | 2,117 | Black-headed Grosbeak | 269 |
| Arkansas Goldfinch (<u>psaltria</u> | | Blue Grosbeak | 2 |
| group) | 13 | Indigo Bunting | 273 |
| Pine Siskin | 449 | Lazuli Bunting | 44 |
| English Sparrow | 350 | Painted Bunting | 72 |
| European Tree Sparrow | 4 | Dickcissal | 1 |
| Snow Bunting | 176 | Western Tanager | 95 |
| Lapland Longspur | 146 | Scarlet Tanager | 86 |
| Chestnut-collared Longspur | 2 | Summer Tanager | 8 |
| McCown's Longspur | 1 | Purple Martin | 318 |
| Vesper Sparrow | 389 | Cliff Swallow | 120 |
| Savannah Sparrow | 907 | Barn Swallow | 2,136 |
| Grasshopper Sparrow | 30 | Tree Swallow | 1,428 |
| Henslow's Sparrow | 11 | Violet-green Swallow | 38 |
| Leconte's Sparrow | 2 | Bank Swallow | 1,947 |
| Sharp-tailed Sparrow | 1 | Rough-winged Swallow | 76 |
| Nelson's Sparrow | 1 | Bohemian Waxwing | 51 |
| Seaside Sparrow | 18 | Cedar Waxwing | 1,556 |
| Lark Sparrow | 103 | Phainopepla | 7 |
| Harris's Sparrow | 2,520 | Northern Shrike | 7 |
| White-crowned Sparrow (<u>leuco-</u> | | Loggerhead Shrike (<u>ludo-</u> | |
| <u>phrys</u> group) | 5,869 | <u>vicianus</u> group) | 148 |

| | | | |
|-----------------------------------------------|-------|-------------------------------------------|-------|
| * Black-whiskered Vireo | 6 | Hooded Warbler | 4 |
| Red-eyed Vireo | 148 | Wilson's Warbler (<u>pusilla</u> | |
| Philadelphia Vireo | 7 | group) | 159 |
| Warbling Vireo | 28 | Canadian Warbler | 142 |
| Yellow-throated Vireo | 2 | Redstart | 885 |
| Blue-headed Vireo (<u>solitarius</u> | | Pipit | 10 |
| group) | 19 | Dipper | 1 |
| White-eyed Vireo | 2 | Mockingbird | 1,092 |
| Bell's Vireo (<u>belli</u> group) | 1 | Catbird | 3,249 |
| Black and White Warbler | 285 | Brown Thrasher | 1,930 |
| Prothonotary Warbler | 21 | Curve-billed Thrasher | 64 |
| Worm-eating Warbler | 9 | Bendire's Thrasher | 14 |
| Bachman's Warbler | 3 | Crissal Thrasher | 5 |
| Blue-winged Warbler | 51 | California Thrasher | 102 |
| Brewster's Warbler | 2 | Leconte's Thrasher | 2 |
| Golden-winged Warbler | 13 | Cactus Wren | 45 |
| * Lucy's Warbler | 1 | Rock Wren | 5 |
| Nashville Warbler | 217 | Cañon Wren | 9 |
| Orange-crowned Warbler (<u>celata</u> | | Carolina Wren | 151 |
| group) | 384 | Bewick Wren (<u>bewicki</u> group) | 157 |
| Tennessee Warbler | 328 | House Wren | 2,792 |
| Parula Warbler | 41 | Winter Wren | 59 |
| Cape May Warbler | 38 | Long-billed Marsh Wren (<u>palustris</u> | |
| Yellow Warbler | 432 | group) | 212 |
| Black-throated Blue Warbler | 121 | Brown Creeper | 291 |
| Myrtle Warbler | 2,123 | White-breasted Nuthatch | 496 |
| Audubon's Warbler | 124 | Red-breasted Nuthatch | 143 |
| Magnolia Warbler | 300 | Brown-headed Nuthatch | 3 |
| Cerulean Warbler | 1 | Pygmy Nuthatch | 36 |
| Chestnut-sided Warbler | 109 | Tufted Titmouse | 432 |
| Bay-breasted Warbler | 64 | Black-crested Titmouse | 7 |
| Blackpoll Warbler | 400 | Plain Titmouse (<u>inornatus</u> | |
| Blackburnian Warbler | 52 | group) | 33 |
| Yellow-throated Warbler | 5 | Chickadee (<u>atricappilus</u> | |
| Black-throated Gray Warbler | 1 | group) | 2,243 |
| Black-throated Green Warbler | 182 | Carolina Chickadee (<u>carolinensis</u> | |
| Pine Warbler | 83 | group) | 100 |
| Palm Warbler | 57 | Mountain Chickadee (<u>gambeli</u> | |
| Prairie Warbler | 38 | group) | 52 |
| Ovenbird | 651 | Hudsonian Chickadee | 2 |
| Northern Water-thrush (<u>norvboracensis</u> | | Chestnut-backed Chickadee | |
| group) | 205 | (<u>rufescens</u> group) | 4 |
| Louisiana Water-thrush | 4 | Bush-tit | 22 |
| Kentucky Warbler | 33 | Verdin | 14 |
| Connecticut Warbler | 50 | Wren-tit | 60 |
| Mourning Warbler | 85 | Golden-crowned Kinglet | 245 |
| Macgillivray's Warbler | 20 | Ruby-crowned Kinglet | 559 |
| Maryland Yellow-throat (<u>trichas</u> | | Townsend's Solitaire | 22 |
| group) | 783 | Wood Thrush | 458 |
| Yellow-breasted Chat | 57 | Veery (<u>fuscescens</u> group) | 149 |

| | | | |
|----------------------------------------------------------|-------|----------------------------------------------------|-------|
| Gray-cheeked Thrush (<u>minima</u> group) | 375 | Varied Thrush | 14 |
| Russet-backed Thrush (<u>ustu-</u> lata group) | 950 | Bluebird | 2,138 |
| Hermit Thrush | 1,560 | Western Bluebird (<u>mexicana</u> group) | 14 |
| Robin | 8,023 | Mountain Bluebird | 50 |

Station totals.--The volume of schedules received during the latter half of June indicates that operators now have a better understanding of the Bureau's rule that, to be included in the totals for the year, records must be actually received before the close of business on June 30.

Corrections.--Unfortunately, a few errors were made in the Bird Banding Notes, vol. 2, No. 15. These the Survey deeply regrets, and it appreciates having them brought to attention.

The name of Robert Ralston should have been included with that of his brother, James G. Ralston, as they work together.

The address of Arthur W. Clausen was erroneously given as Winnetka, Ill., instead of Blue Island, Ill.

Mrs. C. E. Peterson, of Madison, Minn., directs attention to the fact that she was credited with 1000 more birds than she banded. Her total was 1,158 instead of 2,158.

Besides those cooperators named in the following tables, 339 others banded a total of 11,379 birds, an average of 33.5 per station.

The following banded more than 5,000 birds:

| | |
|-------------------------------------------------------------------|--------|
| E. A. McIlhenny, Avery Island, La. | 27,076 |
| Philip A. DuMont, Columbia, S. Dak. | 16,451 |
| Austin Ornithological Research Station, North Eastham, Mass. | 13,544 |
| C. C. and F. E. Ludwig, Lansing, Mich. | 9,641 |
| Wm. I. Lyon, Waukegan, Ill. | 8,162 |
| Harold C. Wilson, Ephraim, Wis. | 7,869 |
| Johnson Neff, Sacramento, Calif. | 7,634 |
| George M. Benson, Burns, Oreg. | 6,564 |
| Mrs. Marie V. Beals, Elmhurst, N. Y. | 5,364 |
| Mr. and Mrs. Harold Michener, Pasadena, Calif. | 5,096 |

The following banded between 1,000 and 5,000 :

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|------------------------------------------------|-------|
| Nahum R. Pillsbury, Jr., Brunswick, Maine | 4,856 |
| Vanez T. Wilson, Brigham, Utah | 4,524 |
| John B. Calhoun, Nashville, Tenn. | 4,094 |
| M. J. Magee, Sault Ste. Marie, Mich. | 4,059 |
| Preston F. Osborn, Lakin, Kans. | 3,919 |
| Mrs. F. C. Laskey, Nashville, Tenn. | 3,535 |
| C. E. Holcombe, Zion, Ill. | 3,328 |
| Wm. P. Wharton, Groton, Mass. | 3,087 |
| Dr. Edmund Jurica, Lisle, Ill. | 3,077 |
| R. J. Middleton, Norristown, Pa. | 2,901 |
| Don H. Welsh, Elkhart, Kans. | 2,817 |
| Irl Rogers, Modesto, Calif. | 2,808 |
| Andrew H. DuPre, McClellanville, S. C. | 2,728 |

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|----------------------------------------------------|-------|
| Christian J. Goetz, Cincinnati, Ohio | 2,698 |
| Irvin S. Sturgis, Lexington, Mo. | 2,514 |
| Prof. O. A. Stevens, Fargo, N. Dak. | 2,447 |
| Seth H. Low, Kenmare, N. Dak. | 2,441 |
| Ben B. Coffey, Jr., Memphis, Tenn. | 2,373 |
| Dr. T. E. Musselman, Quincy, Ill. | 2,367 |
| Miss Ida Merriman, Kingston, Ont. | 2,363 |
| Mrs. Ethel M. Crowell, Franklin, Mass. | 2,352 |
| Dr. J. F. Brenckle, Melette, S. Dak. | 2,317 |
| C. G. Fairchild, Merrill, Oreg. | 2,275 |
| Harold S. Peters, Charleston, S. C. | 2,040 |
| Henry P. Baily, Philadelphia, Pa. | 1,990 |
| J. Carl Welty, Beloit, Wis. | 1,875 |
| Karl E. Bartel, Blue Island, Ill. | 1,862 |
| Miss Louise J. Miller, Zion, Ill. | 1,825 |
| Howard W. Braun, Canton, Ohio | 1,733 |
| Mrs. H. W. Gray, Wilton, N. Dak. | 1,727 |
| Jack C. Russell, Gainesville, Fla. | 1,716 |
| M. L. Jones, Pomeroy, Iowa | 1,714 |
| Dr. Allen M. Pearson, Auburn, Ala. | 1,692 |
| W. W. Demeritt, Key West, Fla. | 1,678 |
| Adrian C. Fox, Park River, N. Dak. | 1,610 |
| S. H. Weakley, Ft. Smith, Ark. | 1,539 |
| Fred G. Bard, Regina, Sask. | 1,533 |
| Mr. and Mrs. Louis G. Flentge, Wheeling, Ill. | 1,530 |
| Frank W. Robl, Ellinwood, Kans. | 1,514 |
| Laurence B. Fletcher, Boston, Mass. | 1,500 |
| Harvey L. Bowen, Broadwater, Va. | 1,494 |
| E. M. and W. M. Davis, Shirley, Mass. | 1,486 |
| Dr. Gardiner Bump, Albany, N. Y. | 1,477 |
| Dr. W. B. Large, Rochester, N. Y. | 1,423 |
| James J. Storrow, Jr., Boston, Mass. | 1,417 |
| Dr. Karl Christofferson, Blaney, Mich. | 1,391 |
| A. J. Butler, Chilliwack, B. C. | 1,349 |
| Vernon C. Rossman, Waukesha, Wis. | 1,346 |
| Dr. Harrison F. Lewis, Ottawa, Ont. | 1,342 |
| Dr. Lawrence E. Hicks, Columbus, Ohio | 1,300 |
| Donald S. Brock, Oakland, Calif. | 1,263 |
| Dr. J. E. Horning, Edmonton, Alta. | 1,236 |
| Chas. R. Mason, Sanford, Fla. | 1,194 |
| Dr. S. Prentiss Baldwin, Cleveland, Ohio | 1,186 |
| Herbert H. Southam, Toronto, Ont. | 1,168 |
| Prof. J. W. Stack, East Lansing, Mich. | 1,166 |
| Frederick C. Labahn, Jr., Blue Island, Ill. | 1,161 |
| C. M. Owens, Monticello, Ark. | 1,152 |
| Howard H. Krug, Chesley, Ont. | 1,147 |
| T. Roy Young, Jr., Tampa, Fla. | 1,131 |
| J. C. Dickinson, Jr., Tampa, Fla. | 1,118 |
| Dr. Ward M. Sharp, Valentine, Nebr. | 1,103 |
| Paul E. Downing, Highland Park, Ill. | 1,085 |

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| Carlos Stannard, Phoenix, Ariz. | 1,077 |
| Henry B. Looff, Oak Harbor, Wash. | 1,074 |
| Verdi Burtch, Branchport, N. Y. | 1,073 |
| Dumont Banding Station, Pequannock, N. J. | 1,047 |
| P. L. Hovey, Brookgreen, S. C. | 1,047 |
| B. S. Bowdish, Demarest, N. J. | 1,038 |
| Chandler R. Young, Martin, S. Dak. | 1,036 |
| Dr. H. A. Burns, Ah-gwah-ching, Minn. | 1,019 |
| Stuart Criddle, Treesbank, Man. | 1,019 |
| Chas. Yeomans, Chicago, Ill. | 1,001 |
| Joseph Powers, Flanders, N. Y. | 1,000 |

The following banded between 800 and 1,000:

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|-----------------------------------------|-------------------------------------------|
| Mrs. N. Edward Ayer, Pomona, Calif. | H. E. McArthur, Waukegan, Ill. |
| Rev. G.C.M. Bierens, Fairmount, N. Dak. | O. S. Pettinghill, Jr., Northfield, Minn. |
| Wm. E. Brentzel, Fargo, N. Dak. | Dr. M. D. Pirnie, Battle Creek, Mich. |
| T. F. Demarest, St. Helen, Mich | P. J. Van Huizen, Willows, Calif. |
| Reed W. Ferris, Beaver, Oreg. | Mrs. K. B. Wetherbee, Worcester, Mass. |
| Fred Gallup, Escondido, Calif. | Albert L. Wilk, Camrose, Alta. |
| Geoffrey Gill, Huntington, N. Y. | Robt. H. Zimmer, Rosamond, Calif. |
| Kenneth Krumm, Middle River, Minn. | |

The following banded between 500 and 800:

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|--------------------------------------------|-------------------------------------------|
| Robert Allison, Athol, Mass. | Edwin D. McKee, Grand Canyon, Ariz. |
| Mrs. Effie A. Anthony, Bar Harbor, Me. | Leonard R. Mewaldt, Aberdeen, S. Dak. |
| Roy N. Bach, Bismarck, N. Dak. | Woodrow M. Middlekauff, Ithaca, N. Y. |
| Adam Brown, Parry Sound, Ont. | George C. Munro, Honolulu, T. H. |
| Oscar M. Bryens, McMillan, Mich. | W. Rodman Peabody, Milton, Mass. |
| Louis W. Campbell, Toledo, Ohio | Dr. Wm. Pepper, Philadelphia, Pa. |
| Louis R. Caywood, Tucson, Ariz. | Wm. Pepper, Jr., Wyncote, Pa. |
| Albert E. Conway, Jr., West Chester, Pa. | Mrs. Charles E. Peterson, Madison, Minn. |
| Mrs. Florence K. Daley, Oliveira, N. Y. | Christopher T. Ridley, Norwood, Man. |
| Dr. D. A. Dery, Quebec, Que. | Maj. G. D. Robinson, St. Petersburg, Fla. |
| Harold Frank, Waukesha, Wis. | Felix Saunders, Chicago, Ill. |
| Allan C. Fraser, Ithaca, N. Y. | Wm. E. Schantz, Columbus, Ohio |
| Mr. & Mrs. J. A. Gillespie, Glenolden, Pa. | Lewis O. Shelley, Westmoreland, N. H. |
| Horace Groskin, Ardmore, Pa. | A. D. Trempe, Sault Ste. Marie, Mich. |
| Dr. Harold H. Hayes, Hubbard Woods, Ill. | C. W. Valencourt, Northfield, Minn. |
| Cordia J. Henry, Upham, N. Dak. | Edward Ward, Delta, Man. |
| Mrs. L. G. Hobson, Louisville, Ky. | Robert E. Ware, Clemson College, S. C. |
| Paul W. Hoffman, Milwaukee, Wis., | Mrs. John A. Webb, Albion, Me. |
| Stanley W. Hyde, Yarmouth, Me. | M. J. Westfall, Jr., Orlando, Fla. |
| V. R. Kiessling, Phoenix, Ariz. | Julius H. White, Rochester, N. Y. |
| P. Kuntz, Winnepeg, Man. | LeRoy Wilcox, Speonk, N. Y. |
| Wallace N. MacBriar, Jr., Milwaukee, Wis. | Donald McL. Wylie, New York, N. Y. |
| Franklin McCamey, Memphis, Tenn. | |

The following banded between 300 and 500:

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| Gordon Acomb, Cincinnati, Ohio | Mrs. J. Y. Hutchinson, Clarksville, Tenn. |
| S. M. Batterson, Mohler, Oreg. | Jack H. Jennings, Bowmanville, Ont. |
| G. L. Berner, Jamestown, N. Dak. | Eric C. Kinsey, Manor, Calif. |
| David V. Black, Cambridge, Md. | Paul T. Kreager, Medicine Lake, Mont. |
| Joseph M. Bradley, Weston, Mass. | George Lang, Indian Head, Sask. |
| Ernest D. Clabaugh, Berkeley, Calif. | Harley C. Lawrence, New Holland, N. C. |
| A. D. Creelman, N. Scituate, Mass. | Mrs. E. B. McCabe, Barkerville, B. C. |
| Mrs. F. M. Cutler, Amherst, Mass. | Miss Grace C. Meleney, White Plains, N. Y. |
| W. M. Davidson, Beltsville, Md. | Paul H. Oppman, Lakewood, Ohio |
| Mrs. H. A. Drew, Barre, Vt. | C. Hapgood Parks, Hartford, Conn. |
| L. E. Dyke, Winter Park, Fla. | T. E. Randall, Lamont, Alta. |
| Mrs. H. H. Edwards, Claremont, Calif. | M. Lawrence Shields, Andover, Mass. |
| E. W. Ehmann, Piedmont, Calif. | D. K. Stephenson, South Bend, Ind. |
| Thos E. Engleby, Roanoke, Va. | Fr. Edward Stoehr, Brookland, D. C. |
| Miss Constance Everett, Waseca, Minn. | Dr. Dayton Stoner, Albany, N. Y. |
| Keahon Garland, Demarest, N. J. | Mrs. A. P. Thomas, Indianapolis, Ind. |
| Earl W. Glandon, Stapleton, Nebr. | Lawrence Tyler, Parry Sound, Ont. |
| Adrian Haak, Norwood, Man. | Dr. B. L. von Jarchow, Racine, Wis. |
| Edw. P. Hamilton, Milton, Mass. | John P. Wetherill, Jr., Philadelphia, Pa. |
| L. L. Hargrave, Flagstaff, Ariz. | Mrs. Will Williams, Bakersfield, Calif. |
| Floyd W. Hatch, Copemish, Mich. | Dr. C. Brooke Worth, Swarthmore, Pa. |
| J. C. Higgins, London, Ont. | Mrs. Ruth J. Wright, Randolph, Mass. |
| Paul F. Hodge, Washington, D. C. | |

The following banded between 200 and 300:

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| Wesley H. Bartlett, Fairfield, Iowa | Allan D. Kirk, Wilkinsburg, Pa. |
| M. E. Beatty, Yosemite Park, Calif. | J. D. Lafleur, Ville Platte, La. |
| James E. Beecher, Chicago, Ill. | Horace D. McCann, Paoli, Pa. |
| Watson E. Beed, Waubay, S. Dak. | Edward McColgan, Catonsville, Md. |
| Dr. D. J. Borrer, Columbus, Ohio | L. J. Merovka, New Orleans, La. |
| Robt. T. Cochran, St. Marks, Fla. | Mrs. D. M. Morrison, Gulfport, Fla. |
| C. Conklin, Canal Winchester, Ohio | S. E. Perkins, III, Indianapolis, Ind. |
| Marshall S. Davison, Enderlin, N. Dak. | James L. Peters, Harvard, Mass. |
| C. V. Duff, Hollywood, Calif. | Richard H. Pough, et al, New York, N. Y. |
| Prof. F. M. Erickson, Salem, Oreg. | Edward J. Reimann, Everglades, Fla. |
| Malcolm H. Finley, Winnetka, Ill. | Barton L. Sharp, Lititz, Pa. |
| Frank B. Foster, Phoenixville, Pa. | H. M. Simpson, West Summerland, B. C. |
| J. M. Frazier, Hattiesburg, Miss. | Donald W. Smith, Wolfville, N. S. |
| Rudolph S. Fried, Katonah, N. Y. | Mrs. R. T. Thomas, N. Little Rock, Ark. |
| Ralph W. Goodale, Hartford, Conn. | H. O. Todd, Jr., Murfreesboro, Tenn. |
| Hatch Graham, Los Angeles, Calif. | George J. Wallace, Lenox, Mass. |
| George B. Happ, Elsau, Ill. | Harry E. Weakly, North Platte, Nebr. |
| B. M. Hazeltine, Malta, Mont. | Franklin H. West, Narberth, Pa. |
| Leonard Heaton, Moccasin, Ariz. | Chas. L. Whittle, Peterboro, N. H. |
| Richard M. Hinchman, Milton, Mass. | Dr. Harold B. Wood, Harrisburg, Pa. |
| Harold L. Hutchins, Hamden, Conn. | |

The following banded between 100 and 200:

Parks Allen, Ithaca, N. Y.
 W. I. Allen, Altadena, Calif.
 Prof. L. M. Ashley, Takoma Pk. Md.
 Arthur Barber, Jersey City, N. J.
 B. A. Barber, Hillsdale, Mich.
 Walt Batezel, Westville, N. J.
 Mrs. F. L. Battell, Ames, Iowa
 Beecher Beery, Pleasant Hill, Ohio
 Chas. T. Black, Chicago, Ill.
 E. T. Boardman, Bloomfield Hills, Mich.
 Homer R. Bolen, Cape Girardeau, Mo.
 Henry A. Bowden, Litchfield, Conn.
 Lowell E. Carter, Russiaville, Ind.
 Raymond & Richard Cayouette, Levis, Que.
 L. B. Chapman, Wellesley, Mass.
 Mrs. J. T. Chesley, Hamilton, Tex.
 R. D. Connor, Livingston, N. J.
 George L. Cook, Bashaw, Alta.
 James Cosbey, Jr., Buffalo, N. Y.
 Gene H. Crawford, Lapwai, Idaho
 Sears Crowell, Oxford, Ohio
 George Curtis, West Newton, Mass.
 David Damon, Kaiser, Mo.
 Ralph D. Dieterle, Detroit, Mich.
 H. M. DuBois, Clackamas, Oreg.
 Mrs. F. L. DuMond, Grand Rapids, Mich.
 Wm. M. Duval, Perce, Que.
 Carl Eggert, Rockford, Ill.
 Arthur S. Einarson, Corvallis, Oreg.
 Anthony H. Erickson, Wilton, N. Dak.
 G. D. Eustis, Vineyard Haven, Mass.
 John E. Fast, Oak Park, Ill.
 Laverne Foeckler, Waukesha, Wis.
 S. C. Fordham, Jr. Delmar, N. Y.
 F. Everett Frei, Glasgow, Ky.
 Miss H. A. Frothingham, Brookline, Mass.
 Mrs. Wm. Gerdes, Jr., Quincy, Ill.
 D. A. Gilchrist, Albuquerque, N. Mex.
 Miss M. E. Gross, Grand Rapids, Mich.
 J. A. Hagar, Marshfield Hills, Mass.
 Samuel A. Harper, Chicago, Ill.
 Mrs. C. S. Hegeman, Montclair, N. J.
 T. S. Hennessy, Ottawa, Ont.
 Mrs. F. L. Hook, Milwaukee, Wis.
 Lawrence E. Hunter, Hanna City, Ill.
 R. H. Imler, Denver, Colo.
 Wm. L. Jellison, Hamilton, Mont.
 F. W. Jensen, College Station, Tex.
 Ellis D. Johnson, Chicago, Ill.
 Mr. and Mrs. C. S. Jung, Milwaukee, Wis.
 Howard W. Knight, Belchertown, Mass.
 Miss M. R. Knox, Indianapolis, Ind.
 Douglas L. Kraus, Princeton, Mass.
 K. K. Kreag, Lansing, Mich.
 Joseph C. Kreuser, Foxholm, N. Dak.
 Bert Lambert, Allenville, Mich.
 Daniel S. Lehrman, New York, N. Y.
 Abe S. Loewen, Hepburn, Sask.
 Geo. W. Luther, DeTour Mich.
 Mrs. Alice McAlister, Canaan, N. H.
 Mr. & Mrs. R. R. McMath, Pontiac, Mich.
 Verl H. Maddy, Stockton, Kans.
 Mrs. Melva T. Maxson, Milton, Wis.
 H. P. Melzer, Milford, N. H.
 Miss Marguerite E. Morrow, Phila, Pa.
 Joseph R. Morton, Winnepeg, Man.
 Farley M. Mowat, Toronto, Ont.
 Walter J. Mueller, Milwaukee, Wis.
 Dayton Murphy, Wellington, Ont.
 Martin K. Nelson, Fertile, Minn.
 Wm. H. Over, Vermillion, S. Dak.
 Mrs. L. B. Payne, Santa Cruz, Calif.
 Theed Pearse, Courtenay, B. C.
 Carl A. A. Pederson, Montvale, N. J.
 Harry C. Pegg, Genevis, Alta.
 Edgar S. Preston, Tower City, N. Dak.
 Ralph C. Preston, Tuckahoe, N. Y.
 J. L. Primrose, Raleigh, N. C.
 H. G. and Robt. Ralston, Flushing, N. Y.
 Harry Richardson, Grand Rapids, Mich.
 Mrs. C. S. Rockwood, Northampton, Mass.
 H. D. Ruhl, Lansing, Mich.
 Richard Santee, San Mateo, Calif.
 L. Alan Sharp, Washington, D. C.
 Chas G. Sibley, Oakland, Calif.
 Frank Smith, Hillsdale, Mich.
 Wendell P. Smith, Wells River, Vt.
 Wm. E. Smith, South Chatham, Mass.
 W. F. Stephenson, Rumney, N. H.
 Miss Edna Stevens, Blue Rapids, Kans.
 Miss E. Grace Stewart, New York, N. Y.
 E. L. Sumner, Menlo, Park, Calif.
 Estes Suter, Hot Springs, S. Dak.
 Mrs. Irene D. Swart, Boonton, N. J.
 Mrs. J. A. Thompson, Minneapolis, Minn.
 Ray M. Verrill, Buffalo, N. Y.
 Miss Blanche Vignos, Los Angeles, Calif.
 Prof. Geo. Wagner, Madison, Wis.
 Clarence Webb, Jr., Earleville, Md.
 Louis M. Weber, St. Louis Mo.
 Mrs. Ruth A. Weyburn, Prides Crossing, Mass.
 Reginald V. Whelan, Smoky Falls Plant, Ont.
 Gailey A. Whitney, Manhattan, Kans.
 Walter N. Wilkins, Chapman, Kans.
 F.J.B. Williams, Portage la Prairie, Man.
 L. S. Williams, Carmel, Calif.
 Miss Marie G. Willson, Greenwich, Conn.
 James B. Young, Louisville, Ky.

PHOTOGRAPHS

While fewer photographs were received this year than last, most of those sent in have been of high quality. Good prints on glossy paper, showing traps or other particular features of the banding work, are very much desired. Traps do not photograph well, so it is somewhat of an accomplishment to take an artistic picture at a banding station.

Those received during the year were as follows:

Dr. Herbert Sanborn, Nashville, Tenn., three pictures of an albino hawk. The bird appears to be almost pure white, but has black eyes.

Christian J. Goetz, Cincinnati, Ohio, four attractive views taken on the estate of a friend where a sub-station is operated.

Donald J. Borrer, Columbus, Ohio, two showing drop and sparrow traps used at his station on the campus of Ohio State University.

Edward McColgan, Catonsville, Md., one of an immature Red-shouldered Hawk and another of a Downy Woodpecker at a lump of suet.

Paul P. L. Kuntz, Winnipeg, Man., one of an Evening Grosbeak on its nest and another showing the nest and eggs.

John B. Calhoun, Nashville, Tenn., two showing the trap used in his Chimney Swift operations at Charlottesville, Va.

A. H. Erickson, Wilton, N. Dak., two pictures of himself and assistants banding migratory waterfowl.

Howard H. Michaud, Spencer, Ind., two pictures of Chardonneret traps, one of which was made from an orange crate covered with hardware cloth.

WORK AT BANDING STATIONS

Prof. Gustav Swanson of the University of Minnesota, St. Paul, Minn., assisted last season in the banding of Woodcock in Maine. He reports that bands of size 3 are better than size 4 and that fledglings two days old are amply large for banding.

Vanez T. Wilson, superintendent of the Bear River Migratory Bird Refuge, Brigham, Utah, reported a total of 3,491 birds banded last season. These represent 25 species, mostly waterfowl and gulls, herons, and shorebirds. The list is headed by the Green-winged Teal, with 1,585.

John A. and Mabel Gillespie, of Glenolden, Pa., are now on their sixteenth year as banding cooperators, during which time they have banded nearly 9,000 birds of 111 species. One of their Blue Jays (A-391665) banded in August 1931, was recaptured at the station in August 1937.

Jack Russell of the Fort Jefferson National Monument, Tortugas Islands, Fla., in 1937 banded 1,639 Sooty Terns and 61 Noddy Terns.

M. J. Magee of Sault Ste. Marie, Mich., in a report dated November 1, 1937, lists 2,319 birds banded during the year, bringing his grand total to 29,519. Of this number 19,389 have been Purple Finches. An even 100 returns for this species were taken by him during 1937, 2 of them being birds banded in 1931. His report also lists several warblers of 9 species.

Prof. O. A. Stevens of Fargo, N. Dak., recorded the banding of 2,434 birds during 1937, representing 61 species. The list contains records of 17 species of warblers.

Woodrow W. Middlekauff, of Hagerstown, Md., is a recruit to the Chimney Swift campaign. He banded more than 700 of these birds at Ithaca, N. Y. during the past spring.

George H. Lowery, Jr., of University, La., is planning extensive operations with Chimney Swifts this season. He expects to band 30,000. During the winter of 1937-38 two of these birds remained around the buildings of Louisiana State University, and in February Mr. Lowery was able to band one of them. This is one of the few winter records for this species in the United States.

Wallace N. MacBriar, Jr., of Milwaukee, Wis., submitted a most interesting report of his operations covering the last half of 1937 and which were conducted in Wisconsin and also at Winter Park, Fla. His total during this period of 237 birds of 33 species includes a few of such unusual captures as the Ground Dove, Least Flycatcher, and Painted Bunting.

W. Rodman Peabody, of Boston, Mass., in commenting upon some of his work, points out that during the period 1929-1936 he banded 500 goldfinches which produced 63 return records. Of these, 1 bird returned in 4 different years, 3 in 3 years, 6 in 2 years, and 53 the year following banding.

Harold C. Wilson, of Ephraim, Wis., sums up his 1937 report by stating that his grand total is now more than 22,200 birds of more than 100 species. Of this total the Herring Gull accounts for 15,657. During 1937 he banded 4,218 birds of 47 species.

E. A. McIlhenny of Avery Island, La., has, as usual, submitted a detailed report of exceptional interest which covers his operations during 1937. This is easily the largest waterfowl station in the country, and this entire issue might easily be devoted to a presentation of the work done at that point. During the calendar year 1937, he banded 25,883 birds, and while most of these were ducks (21 species, including such birds as 15 Fulvous Tree Ducks,

181 Mottled Ducks, 5 Buffleheads, and 38 Ruddy Ducks), and geese (including 6 Snow Geese and 72 Blue Geese), he also banded large numbers of Black Vultures (2,338), Florida Gallinules (666), Chimney Swifts (397), Tree Swallows (243), Fish Crows (165), Boat-tailed Grackles (1351), Cowbirds (477), Cardinals (107), and Savannah Sparrows (241). The Pintail heads his list with nearly 6,000, while the record also includes nearly 3,000 Blue-winged Teal, 350 Wood Ducks, 1,800 Ring-necked Ducks, 2,700 Lesser Scaup Ducks, and more than 1,100 Coots. Naturally, large numbers of station returns were recorded, including many ducks banded back to 1930. His work with the Black Vulture yielded 133 returns of birds banded back to 1934.

Donald McL. Wylie, of New York, N. Y., during his first year of operation, banded 621 birds of 33 species.

Dr. Lawrence E. Hicks, Director of the Cooperative Wildlife Research Station at Columbus, Ohio, has submitted a report on the banding project started on Pymatuning Lake which straddles the Ohio-Pennsylvania line. The work was started in March, 1938, and by May 1 more than 350 ducks of 9 species (and including the Coot), had been banded. Establishment of this station is expected to fill an important gap on the Atlantic flyway.

John B. Calhoun of Nashville, Tenn., is taking an active part in the extensive banding of Chimney Swifts. During May 1938, he and Joshua C. Dickinson, Jr., of Tampa, Fla., banded nearly 3,500 of these birds at the University of Va., Charlottesville, Va.

Philip A. DuMont, Manager of the Sand Lake Waterfowl Refuge, Columbia, S. Dak., reports banding 16,453 birds of 93 species during the last fiscal year. While his record naturally contains data for large numbers of ducks, the list is actually headed by the Franklin's Gull, of which nearly 9,000 were banded. Fifteen different kinds of shorebirds also are listed, including such unusual species as the Black-bellied Plover, Upland Plover, Baird's Sandpiper, Stilt Sandpiper, Buff-breasted Sandpiper, and Marbled Godwit. Four species of thrushes, 9 warblers, and 18 different sparrows and finches were banded. In transmitting the report Mr. DuMont acknowledges the able assistance rendered by Paul E. Osborn, a student from Iowa State College, and Herbert R. Wells, biologist of the Sand Lake CCC Camp.

Prof. J. W. Stack of Michigan State College, East Lansing, Mich., has submitted a summary report for the period January 1 to July 1, 1938, when 683 birds were banded. Since October 12, 1923, when this station was started 17,258 birds have been banded.

C. C. Ludwig, of Lansing, Mich., reports that he and his son, Dr. F. E. Ludwig, banded 7,292 gulls and terns on two summer trips to breeding colonies in Lake Huron. The total includes a few other birds, but Ring-billed and Herring Gulls, and Common and Caspian Terns make up most of the number.

Donald J. Borrer of Columbus, Ohio, has transmitted a report covering operations at the State University for the spring season (ending May 31, 1938). The use of five traps of different types resulted in the capture of 215 birds. The report is accompanied by an analysis of captures at the different substations. In point of numbers taken the Junco heads the list, followed by the Song Sparrow, Catbird, and Brown Thrasher.

TRAPS

O. J. Gromme of the Milwaukee Public Museum, Milwaukee, Wis., has furnished the Survey with a complete account of the method he has so successfully used for the capture of hawks. This is, of course, highly specialized work, and it does not seem desirable to include details at the present time. Nevertheless, it may be made available to any investigator who has the time and interest to go into this field. Despite the almost universal prejudice that exists toward these birds, every naturalist admires them and appreciates their value as a part of our native wildlife.

Major G. D. Robinson of St. Petersburg, Fla., has been getting results by capturing ducks and gulls with a "wire crook," like the conventional "shepherd's crook." This is an idea that probably will work in almost every place where such birds become tame through regular feeding.

Earl W. Glandon, of Stapleton, Nebr., has described and figured a trap he developed out of a Michener water trap (fig. 28, p. 39, Manual). It can, of course, be of original construction. A door is cut at the ground level on the side opposite the trigger. This is hinged at the top in the usual way so that it will swing out to a horizontal position when set. A stiff wire is woven through the meshes of the door and extended on the inside of the trap, past the hinge side or top. This extension should be just long enough to engage with the trigger when the door is open. It is bent at the top of the door to the correct angle to establish the contact. The pressure at the point of contact with the trigger can be adjusted so that the lightest bird will trip it. Rubber bands attached to the ends of the door supply the tension. Mr. Glandon reports he has found that many birds that will not enter a Potter trap will go into this one.

Mertys R. Webb of Albion, Me., has devised an ingenious device for operating a top-opening water-trap. The trap is merely a 12-inch cube of hardware cloth with the top hinged on one side. For a trigger, slender pieces of light wood are put together in the form of an L with an "outside jog" about the center of the vertical part. The lower or horizontal part forms the perch, and the trigger is balanced near the center on the top edge of one side, the upper end engaging lightly with a short piece of wood attached to the edge of the door. This really is an adaptation of the "broken perch" idea (see fig. 21, p. 29, Manual) except that the "break" is on a vertical instead of a horizontal trigger.

Carl A. A. Pedersen, of Montvale, N. J., reports adding a 4-cell Chardonneret trap to his equipment, as he noticed that warblers always tried to get into a trap that was already

occupied. The captured bird acts as a decoy. With the new trap he states he has frequently caught five birds at once. As a means of regulating the closing of the doors he attaches pieces of sheet lead near the outer edge.

BANDS

Series designation.--The attention of all station operators is again directed to the importance of noting the series designation, both on schedules and return cards. This was the subject of a special memorandum dated August 27, 1938. Some numbers have been duplicated many times and can be distinguished only by the series. The fiscal year when any particular lot of bands is purchased, is now used, i. e., "38", "39", etc. Because of their extensive use it is necessary to use sub-series for sizes 0 and 1, so bands may be received with a series designation such as "139" or "239". Band numbers are correctly written as 38-241734, or 139-59218. Bands in stock of back series are issued and should be used like those of a newer series; in other words, the series designation has no significance in the banding record other than to distinguish each number from the same number in other series.

Large orders.--Cooperators planning work that will require unusually large quantities of bands must advise the Survey at least a month in advance of the time it is expected to start the work. Unless this is done there is no assurance the material will be available.

Celluloid bands.--The colored celluloid bands stocked by the Survey are not for general use and should be requisitioned and attached to birds only when some specific study is being conducted that makes desirable field identification of individual birds.

Cooperators also are requested not to use colored celluloid bands of their own manufacture or purchase. To do so is likely to confuse some important investigation that is developing through this method. Any work of this kind already done (particularly with gulls) should be reported so that some records that now are not understood, can be clarified.

Bands for Birds of Prey.--To assist the National Association of Audubon Societies in its efforts to band larger numbers of hawks and owls, the Bureau will appreciate advice from those operators who have had experience with these birds, as to the band sizes they have found most suitable for the different species. As with all other birds the correct band is one that fits smoothly but is neither too tight nor too loose.

Chimney Swifts.--A recent letter reporting the recovery of a Chimney Swift was accompanied by the banded foot as the bird was found dead. The band, of size 1A, has slipped down over the toes and locked them together. This furnishes additional evidence that the correct band to use on most Chimney Swifts is size 1. If an occasional bird has a tarsus too large for this band, size 1A may be used, but all operators working with this species should keep these facts in mind when planning further work.

RETURNS

As noted elsewhere in this issue, valuable tables of return data have been published in "The Log of Tanager Hill" and "The Book of Birds." The Survey also has continued to take advantage of the generosity of the editor of "Bird Banding" so that two extensive series of these data have been published during the year in that journal. Another paper that probably will appear in the October number is now in preparation.

Among the many records of unusual interest received during the year, the following are listed:

36-412807, Pied-billed Grebe, banded June 25, 1937 at Columbia, S. Dak., was killed at McAllister, Okla., October 10, 1937.

703556, Herring Gull, banded June 30, 1928, at Hat Island, Green Bay, Wis., by Wallace B. Grange, was collected for scientific purposes in the same locality, on July 14, 1938.

37-514389, Franklin Gull, banded June 25, 1937, at the Sand Lake Migratory Waterfowl Refuge, Columbia, S. Dak., by P. A. DuMont, was caught on a fish-line at Champerico, Guatemala, on February 1, 1938.

325945, Caspian Tern, banded July 21, 1924 at St. James, Mich., by F. C. Lincoln, was shot at Pestagua Island, Magdalen River delta, Colombia, on December 11, 1937.

The following Common Terns, banded as juveniles, at Penikese Island, Mass. by Dr. Winsor Tyler, were retaken at their nests in the same colony by Dr. O. L. Austin.

| <u>Number</u> | <u>Banded</u> | <u>Recaptured</u> |
|---------------|---------------|-------------------|
| 711560 | August 1928 | June 10, 1938 |
| A 330129 | July 4, 1929 | June 8, 1938 |
| A 330498 | July 4, 1929 | June 10, 1938 |
| A 331993 | July 4, 1929 | June 9, 1938 |
| A 332036 | July 1929 | June 10, 1938 |
| A 333113 | July 7, 1930 | June 9, 1938 |
| A 333317 | July 7, 1930 | June 9, 1938 |
| A 334608 | July 7, 1930 | June 9, 1938 |

36-310858, Roseate Tern, banded July 6, 1936 at Chatham, Mass., by Dr. O. L. Austin, was found dead at Tuschen, West Demerara, British Guiana on August 29, 1937.

36-346019, Roseate Tern, banded June 30, 1937 at Ram Island, Mattapoissett, Mass., by Ethel M. and Sears Crowell, followed a ship for three days, spending the nights on board. It was finally captured and released on November 11, 1937 at a point 80 miles off the coast of Paramaribo, Dutch Guiana.

36-814925, Laysan Albatross, banded July, 1937 at Midway Island, Hawaiian Group, by Fred C. Hadden, flew on board the S. S. Kichyo Maru, on December 12, 1937, while the vessel was 310 miles off the coast of Kinkazan, Japan. Band was removed and bird released.

36-719273, Water-turkey, banded May 24, 1936, at Glen Allan, Miss. by Ben B. Coffey, was killed at Cosamaloapam, V. C., Mexico, on August 7, 1937.

101952, Mallard, banded January 15, 1923 at Cuivre Island, Mo., by L. V. Walton, was shot October, 1937, at Montreal Lake Post, Hudson's Bay Co., Sask.

230148, Mallard, banded November 18, 1922 at Browning, Ill., by F. C. Lincoln, was shot near Beardstown, Ill., on November 28, 1937.

232682, Mallard, banded at Portage des Sioux, Mo., on February 25, 1924, by John Broeker, was shot on December 7, 1937 at Mangham, La.

595137, Mallard, banded at Moiese, Mont., on November 18, 1927, by Frank H. Rose, was found dead on April 8, 1938 at Goodwater, Sask.

37-649660, Black Duck, banded in September 1937 at Riverhead, L. I., N. Y., by Joseph Powers, was shot on December 30, 1937 in Bolivar Co., Miss.

38-502623, Blue-winged Teal, banded September 16, 1937, at Wellington, Ont., by Dayton Murphy, was "found exhausted" on Barbuda Island, B.W.I. on October 28, 1937.

A 692459, Pintail, banded January 17, 1929 at Oakland, Calif., by E. W. Ehmann, was killed at Contra Costa, Calif., on December 15, 1937.

C 635978, Wood Duck, banded April 25, 1937, at Salem, N. J., by J. A. Gillespie, was caught alive in the same nesting cavity, on May 1, 1938.

321571, Greater Scaup, adult, banded December 23, 1926, at Mohler, Oreg., by S. M. Batterson, has been retrapped at the banding station on March 3, 1927, February 17, 1928, January 3, 1935, and January 5, 1938.

A 5362-- , Greater Scaup, banded December 25, 1931 at Monck's Corner, S. C., by Dr. O. L. Austin, Jr., was shot on October 11, 1937, at Erickson, Man.

36-720554, Blue Goose, banded August 30, 1937, at Morris, Man., by Peter Gebauer, was killed in April, 1938 at a point 100 miles west of Weenusk Post (via Moosonee), Ont.

34-121374, Semipalmated Sandpiper, banded October 19, 1937, at Ashbridge's Bay, Toronto Ont. by Herbert H. Southam, was found injured at Belleville, St. Michaels, Barbados,

B. W. I., during January, 1938.

A 452873, Greater Yellow-legs, banded October 7, 1935 at North Eastham, Cape Cod, Mass., by Dr. O. L. Austin, was killed May 11, 1938 at Mingan, Saguenay Co., Que.

36-670515, Marsh Hawk, banded July 5, 1937 in McHenry Co., N. Dak. by C. J. Henry, was killed March 9, 1938, at Tangancicuaro, Mich., Mexico.

37-509701, Marsh Hawk, banded June 25, 1937 at Minneapolis, Minn., by R. H. Pough, was killed at Jamaicatown, near Havana, Cuba, on January 26, 1938.

A 573005, Cooper's Hawk, banded July 8, 1933 at Charleswood, Man., by J. P. Kennedy, was shot at Andalucia, Colombia, S. A., about February 1, 1938.

309002, Red-tailed Hawk, juv., banded June 29, 1924 at Muscow, Sask., by R. H. Carter, Jr., was killed at Ethel, La., January 17, 1938.

309020, Red-tailed Hawk, juv., banded July 3, 1927 at Muscow, Sask. by R. H. Carter, Jr., was shot about January 3, 1938 near Greenwood, Ark.

320501, Red-tailed Hawk, banded November 9, 1924 at Hamilton, Kans. by Dr. G. C. Rinker, was killed in April 1937, at El Dorado, Kans.

36-720569, Harlan's Hawk, adult, banded November 24, 1936, at Stockton, Kans., by Ralph H. Imler, was killed on December 7, 1937, at Lacombe, Alta.

660553, Red-shouldered Hawk, juv., banded June 14, 1931 at Huntington, Mass., by A. A. Cross, was killed at Oak Hill, Ala., on December 27, 1936.

34-647049, Prairie Falcon, juv., banded June 6, 1937 at Mt. Dome, Siskiyou Co., Calif., by E. C. Aldrich, was found dead about October 16, 1937 at Swift Current, Sask.

A 700460, Osprey, banded June 20, 1936 at Orient, L. I., N. Y., by Leroy Wilcox, was found dead 7 miles west of Ilheos, Brazil, on August 12, 1937.

37-415980, Belted Kingfisher, banded June 30, 1937 at Waukesha, Wis. by V. C. Rossman, was reported from Society Hill, S. C., on November 22, 1937.

B 247021, Nighthawk, banded June 13, 1933 at Hamden, Conn., by H. L. Hutchins, was re-taken at the same place on June 21, 1938. It also was recaptured in 1937 and Mr. Hutchins is satisfied it was back and nesting on the same roof in 1934, 1935, and 1936.

199067, Chimney Swift, banded at Thomasville, Ga., on April 12, 1927, by H. L. Stoddard, was caught at Choisy, Que., on July 10, 1938.

414306, Blue Jay, banded November 15, 1927, at Lakewood, Ohio, by E. C. Hoffman, has been retaken at the banding station on May 27, 1928, December 15, 1929, May 28, 1930, and May 23, 1937.

36-353390, Blue Jay, banded February 17, 1937 at Washington, D. C. by C. J. Stajkowski, was found dead at Providence, R. I., on April 15, 1938.

37-302815, Blue Jay, banded May 17, 1937, at Hubbard Woods, Ill., by Chas. Yeomans, was killed at Brownsville, Tex., on November 6, 1937.

211123 (or 4), Crow, banded April 16, 1924 at Otto, Man., by Adolf L. Holm, was killed on January 13, 1938 at Sherman, S. Dak.

34-248567, Cowbird, adult, banded April 13, 1937 at Waukegan, Ill., by the late Wm. I. Lyon, was shipped to Denver, Colo., and released on April 28, 1937, returning to Waukegan on May 23, 1937; shipped to Quebec, Que., and released on May 26, 1937, it was back in Waukegan on March 27, 1938; shipped to Halifax, N. S., and released on April 29, 1938. It was found dead in the same region on the following day.

34-248842, Cowbird, banded by the late Wm. I. Lyon at Waukegan, Ill. was shipped to Boston, Mass., and released on May 19, 1937. It was shot at Nome, Tex., on November 19, 1937.

A 446165, Bronzed Grackle, banded June 6, 1932 at Kansas City, Mo. by Harold Hedges, was retaken at the banding station on May 15, 1933. On February 23, 1937, it was caught and released by Frank Clarkson at Houston, Tex., and on May 19, 1937 it was again trapped at the station where it was banded.

34-208518, Evening Grosbeak, banded January 29, 1934, at Milford, N. H., by James P. Melzer, was trapped and released on February 12, 1938 at Sault Ste. Marie, Mich., by M. J. Magee.

34-251704, Evening Grosbeak, banded January 4, 1935 at Norwood, Man. by C. T. Ridley, was trapped and released at Winnipeg, Man. on December 2, 1937, by Paul Kuntz.

B 157310, White-crowned Sparrow, banded October 27, 1936 at Blacksburg, Va. by Chas. O. Handley, was found dead at Lovelady, Tex., on January 16, 1938.

A 178778, Nuttall's Sparrow, banded June 19, 1930, at Berkeley, Calif., by Ernest D. Clabaugh, was retrapped in the same locality by Mr. Clabaugh on September 17, 1937.

34-158883, White-throated Sparrow, banded on May 2, 1935 at Norristown, Pa., by R. J. Middleton, was recaptured and released on May 8, 1938 at St. Paul's Island, off Cape North, Cape Breton Island, N. S.

35-65081, Junco, banded on March 16, 1936 at Zion, Ill., by Louise J. Miller, was caught in a snare set for rabbits, at Mud Lake, Patricia District, Ont., on May 28, 1938.

37-84478, Junco, banded November 29, 1937, at Nashville, Tenn., by Mrs. F. C. Laskey, was trapped and released at Blaney Park, Mich., on April 14, 1938 by Dr. Karl Christofferson.

38-41158, Swamp Sparrow, banded October 4, 1937, at Shirley, Mass. by Wm. M. Davis, was recaptured at Plant City, Fla., on January 4, 1938.

A 284151, Black-headed Grosbeak, adult, banded at Camp 9, Yosemite Valley, Calif., on May 5, 1933, by A. E. Borrell, was retrapped at the same point by C. V. Duff, on June 28, 1938.

B 219327, Purple Martin, banded May 30, 1934 at Winona, Minn., by Elmer Ollhoff, was "found" at Itaituba, Para, Brazil, in December, 1936.

34-95949, Cliff Swallow, banded June 14, 1937 at Dell Rapids, S. Dak. by Forrest E. Elliott, was captured and released at Ghent, W. Va., on July 16, 1937.

C 3371, Barn Swallow, juv., banded at Muscow, Sask., on July 7, 1929 by R. H. Carter, Jr., was found dead during June, 1935 at El Carmen, Rio Madre de Dios, Territory of Colonias del Norte, Bolivia.

35-108210, Cedar Waxwing, banded April 14, 1935, at Modesto, Calif., by Charles H. Feltes, was killed about March 29, 1937, at Meridianville, Ala. This is the second record for one of Mr. Feltes' waxwings to be recovered in the southeast. An accurate description of the bird, together with the band, was sent in with the recovery data.

36-25710, Cape May Warbler, banded September 12, 1937 at Elmhurst, L. I., N. Y., by Mrs. Marie V. Beals, was caught by a cat at Cleveland, Tenn., about October 15, 1937.

37-394-, Myrtle Warbler, banded October 19, 1937 at North Eastham, Cape Cod Mass., by Dr. O. L. Austin, was killed by a hawk at Fort Meade, Fla., on April 16, 1938.

C 21641, Black-capped Chickadee, banded October 16, 1929 at Bar Harbor, Me., by Mrs. Effie Anthony, was retaken by her at the same point on November 12, 1937.

37-117339, Olive-backed Thrush, banded May 25, 1937, at Madison, Minn., by Mrs. C. E. Peterson, was found dead about June 17, 1937 at Vulcan, Alta.

37-209601 and 37-209602, Robins, banded May 10, 1937, from the same trap at Hubbard Woods, Ill., by Dr. Harold H. Hays, were retaken together in the same trap on March 26, 1938.